



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0828; Project Identifier AD-2021-00303-T]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to supersede Airworthiness Directive

(AD) 2016-09-01, which applies to certain The Boeing Company Model 777-200 and -300 series airplanes. AD 2016-09-01 requires repetitive inspections for cracking of the left-and right-side forward outer chords of the pivot bulkhead, and related investigative and corrective actions if necessary. AD 2016-09-01 also provides a modification of the pivot bulkhead, which terminates the repetitive inspections. Since the FAA issued AD 2016-09-01, it has received reports that cracking of the left- and right-side forward outer chords of the pivot bulkhead were found at earlier compliance times than those specified in AD 2016-09-01 and determined that the inspection areas must be expanded, and that additional inspections are needed in areas that were modified as specified in AD 2016-09-01. This proposed AD would retain certain requirements of AD 2016-09-01. This proposed AD would require doing repetitive detailed and high frequency eddy current (HFEC) inspections of the longeron fitting and, for certain airplanes, the bulkhead assembly structure, for any cracking and doing all applicable on-condition actions. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0828.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0828; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Luis Cortez-Muniz, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des

Moines, WA 98198; phone and fax: (206) 231-3958; email:

Luis.A.Cortez-Muniz@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-0828; Project Identifier AD-2021-00303-T” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend the proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this proposed AD.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Luis Cortez-Muniz,

Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: (206) 231-3958; email: Luis.A.Cortez-Muniz@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA issued AD 2016-09-01, Amendment 39-18499 (81 FR 26109, May 2, 2016) (AD 2016-09-01), for certain The Boeing Company Model 777-200 and -300 series airplanes. AD 2016-09-01 was prompted by reports of fatigue cracking of the forward outer chord of the station (STA) 2370 pivot bulkhead. AD 2016-09-01 requires repetitive inspections for cracking of the left- and right-side forward outer chords of the pivot bulkhead, and related investigative and corrective actions if necessary.

AD 2016-09-01 also provides a modification of the pivot bulkhead, which terminates the repetitive inspections. The agency issued AD 2016-09-01 to address fatigue cracking of the outer flanges of the left and right side forward outer chords of the STA 2370 pivot bulkhead, which could result in a severed forward outer chord and consequent loss of horizontal stabilizer control.

Actions Since AD 2016-09-01 Was Issued

Since the FAA issued AD 2016-09-01, it has received reports that cracking of the left- and right-side forward outer chords of the pivot bulkhead were found at earlier compliance times than those specified in AD 2016-09-01 due to a combination of a stress concentration and high stress from complex loading at the structure of the transition radius of the forward outer chord flange. Boeing reopened the safety investigation and asked operators to gather additional data, which showed 32 airplanes with crack findings below the inspection threshold specified in AD 2016-09-01. Based on those findings, it has been determined that the compliance times must be reduced and the inspection areas for cracking must also be expanded to include the longeron fitting and, for post-repair

and post-modification inspections, the bulkhead assembly structure. In addition, the FAA has determined that additional inspections are needed in areas that were modified as specified in AD 2016-09-01.

FAA's Determination

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Related Service Information under 1 CFR Part 51

The FAA reviewed Boeing Alert Service Bulletin 777-53A0075, Revision 2, dated February 22, 2021. This service information specifies procedures for, depending on configuration, doing repetitive detailed and HFEC inspections of the STA 2370 pivot bulkhead forward outer chord and the longeron fitting for any cracking; doing repetitive post-repair inspections of the pivot bulkhead forward outer chord, longeron fitting, and bulkhead assembly structure for any cracking; doing repetitive post-modification inspections of the pivot bulkhead forward outer chord, longeron fitting, and bulkhead assembly structure for any cracking; and doing all applicable on-condition actions. On-condition actions include modifying the left and right forward outer chords and upper splice angles, and repair.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Proposed AD Requirements in this NPRM

Although this proposed AD does not explicitly restate the requirements of AD 2016-09-01, this proposed AD would retain certain of the requirements of AD 2016-09-01. Those requirements are referenced in the service information identified previously, which, in turn, is referenced in paragraph (g) of this proposed AD. This

proposed AD would reduce the compliance times for the inspections, add new inspection areas for any cracking, and add repetitive post-modification inspections. This proposed AD would also require accomplishment of the actions identified as “RC” (required for compliance) in the Accomplishment Instructions of Boeing Alert Service Bulletin 777-53A0075, Revision 2, dated February 22, 2021, described previously.

For information on the procedures and compliance times, see this service information at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0828.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 63 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Detailed and HFEC inspections of the longeron fitting and pivot bulkhead forward chord	Up to 15 work-hours X \$85 per hour = Up to \$1,275 per inspection cycle	\$0	Up to \$1,275 per inspection cycle	Up to \$80,325 per inspection cycle
Post-repair inspections	Up to 13 work-hours X \$85 per hour = Up to \$1,105 per inspection cycle	\$0	Up to \$1,105 per inspection cycle	Up to \$69,615 per inspection cycle
Post-modification inspections	18 work-hours X \$85 per hour = \$1,530 per inspection cycle	\$0	\$1,530 per inspection cycle	\$96,390 per inspection cycle

The FAA estimates the following costs to do any necessary modifications that would be required based on the results of the proposed inspection. The FAA has no way of determining the number of aircraft that might need this modification:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Modification	Up to 137 work-hours X \$85 per hour = Up to \$11,645	\$34,086	Up to \$45,731

The FAA has received no definitive data on which to base the cost estimates for the repairs specified in this proposed AD.

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, all of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected operators.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA has determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:

- a. Removing Airworthiness Directive (AD) 2016-09-01, Amendment 39-18499 (81 FR 26109, May 2, 2016), and

- b. Adding the following new AD:

The Boeing Company: Docket No. FAA-2021-0828; Project Identifier AD-2021-00303-T.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) action by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2016-09-01, Amendment 39-18499 (81 FR 26109, May 2, 2016) (AD 2016-09-01).

(c) Applicability

This AD applies to The Boeing Company Model 777-200 and -300 series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 777-53A0075, Revision 2, dated February 22, 2021.

(d) Subject

Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Unsafe Condition

This AD was prompted by reports of fatigue cracking of the forward outer chord of the station (STA) 2370 pivot bulkhead, and the determination that the compliance times need to be reduced, post-modification inspections must be done, and the inspections areas need to be expanded due to additional cracking found prior to the inspection times required by AD 2016-09-01. The FAA is issuing this AD to address fatigue cracking of the outer flanges of the left and right side forward outer chords of the STA 2370 pivot bulkhead, which could result in a severed forward outer chord and consequent loss of horizontal stabilizer control.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

Except as specified by paragraph (h) of this AD: At the applicable times specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 777-53A0075,

Revision 2, dated February 22, 2021, do all applicable actions identified as “RC” (required for compliance) in, and in accordance with, the Accomplishment Instructions of Boeing Alert Service Bulletin 777-53A0075, Revision 2, dated February 22, 2021.

(h) Exceptions to Service Information Specifications

(1) Where the “Effectivity” paragraph and the Condition and Compliance Time columns of the tables in the “Compliance” paragraph of Boeing Alert Service Bulletin 777-53A0075, Revision 2, dated February 22, 2021, use the phrase “the Revision 2 date of this Service Bulletin,” this AD requires using “the effective date of this AD.”

(2) Where Boeing Alert Service Bulletin 777-53A0075, Revision 2, dated February 22, 2021, specifies contacting Boeing for repair instructions: This AD requires doing the repair using a method approved in accordance with the procedures specified in paragraph (i) of this AD.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in Related Information. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company Organization Designation Authorization (ODA) that has been authorized by the

Manager, Seattle ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) Except as specified by paragraph (h) of this AD: For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (i)(4)(i) and (ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. If a step or substep is labeled “RC Exempt,” then the RC requirement is removed from that step or substep. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator’s maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(j) Related Information

(1) For more information about this AD, contact Luis Cortez-Muniz, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: (206) 231-3958; email: Luis.A.Cortez-Muniz@faa.gov.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St.,

Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Issued on September 16, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2021-22251 Filed: 10/13/2021 8:45 am; Publication Date: 10/14/2021]